The young pores are very shallow and the stem appears reticulate-veined nearly to the base. As the pores become older they deepen and those nearest the base of the stem become more or less obscured.

In pine woods, Auburn, Alabama, Dec., 1896. Mrs. F. S. Earle.

PUCCINIA POLYSORA n. sp.

II., III. Amphigenous; sori very small, short, very numerous but irregularly scattered, remaining long enclosed in the tough epidermis of the host, at length rupturing by a narrow slit; uredospores large, broadly oval, 35 × 30 μ, scarcely echinulate, the epispore of medium thickness, pale rusty brown; teleutospores variable, usually short, irregularly oblong, often somewhat constricted at the septum, averaging 25 × 40 μ, the cells often irregularly angled, the upper usually broader than long, blunt or rounded above; apex not thickened; pedicel usually short.

On *Tripsacum dactyloides*, Auburn, Alabama, August and October, 1891, B. M. Duggar.

USTILAGO SPARSA n. sp.

Parasite infesting occasional ovaries and transforming them into somewhat sphaerical olivaceous pustules covered by the changed and roughened seed coat, 1–3 mm. in diameter, the remainder of the inflorescence unchanged; spores regularly oval, distinctly echinulate, about 7–9 μ in length.

Related to *U. neglecta* Niessl. and *U. spermophora* B. & C., but distinguished from them by its larger pustules and smaller spores. It has nothing in common with *U. Dactyloctaenii* P. Henn. Die Pflanzenwelt Ost-Afrika, 5 : 48 which occurs on the same host, has dark violet horn-shaped sori and sm ›oth spores, 10–14 μ.

In scattered ovaries of *Dactyloctenium Aegyptium*, Auburn, Alabama, November, 1895, and October, 1896. Underwood & Earle.

February 8, 1897.

An undescribed Lechea from Maine.

BY EUGENE P. BICKNELL.

One of the most characteristic plants of York Harbor, Maine, is a species of *Lechea* which abounds in dry open places, especially

over the weedy downs near the sea. Upon visiting York Harbor some years ago my attention was at once arrested by this plant, which was obviously neither *Lechea intermedia* nor *Lechea maritima*, the only eastern pinweeds which could be considered at all in connection with it. Subsequent investigation discovered that the plant, though it had never been discussed in print, had not been overlooked by botanists, but had been a long-standing puzzle variously solved, it appeared, in terms of one or the other of the species named above. Material from different collectors which had formed part of Mr. Leggett's collection and bore his penciled memoranda showed that the plant had perplexed that careful student of the genus, who had at different times referred it doubtfully both to *Lechea intermedia* and to *Lechea maritima* and had at least entertained the idea that it might be referable to the more western *Lechea stricta*. It may be said here that Mr. Leggett's material was not fairly representative of the plant and was quite insufficient to form a basis for any safe conclusions. For this reason the same material was passed over by Dr. Britton in his revision of the genus (Bull. Torr. Club, 21: 244–253, 1894), which therefore affords no help in the present case. In Dr. Robinson's recent critical treatment of the genus (Syn. Fl. 1: Part 1, 192–194, 1895) we find the first published notice of the Maine plant. It is there mentioned under *Lechea stricta* as being nearly related to that species, but as probably to be referred to *Lechea intermedia*. The case, therefore, stands to-day just as it was left by Mr. Leggett over fifteen years ago.

During several visits to York Harbor in August this pinweed has claimed my particular attention, and I have realized in the field that the problem it presented was indeed a perplexing one. The main facts in the case seem to be these: The plant has much the aspect of *Lechea stricta*, and is hence frankly distinguished in appearance from *Lechea intermedia;* nevertheless, though closely allied to the former it is not that species, but is a more or less immediate derivative of the latter, as is shown by the occurrence of forms not satisfactorily referable to either plant.

Technically, therefore, on the evidence, the plant is a variety of *intermedia*—an incompletely detached derivative of that species. Actually it has reached a degree of differentiation which, measured

by the slight differences separating species in this group of plants, is certainly remarkable, and may fairly be taken as of species value despite the apparently intergrading forms. Indeed, so distinct from *intermedia* does the typical plant appear that it may well be questioned whether intergradation between the two is not, after all, more apparent than real. When we recall instances of perfectly distinct species exhibiting an apparent identity up to the time of full maturity of flower or fruit we find ourselves less ready to assign doubtful specimens to the category of intergrades. It may be readily conceived that between certain individuals of nearly related plants an inherent distinctness may be completely disguised to the eye as a result of retarded development or other cause. Be this as it may, I am sufficiently satisfied of the expediency of recognizing as a species the *Lechea* here discussed. To refer it to either of its near allies would be to evade a difficulty through a makeshift, and as for varietal rank the grade *variety* has been misused out of all definite meaning. Species are necessarily of different values. Closely similar but trenchantly distinct plants range side by side with species far more divergent from each other, yet inter-related through medial forms. The relegation of such well-characterized plants to the vague rank of *variety* surely involves a disregard of the facts of nature not to be excused by an appeal to the supposed requirements of a system of nomenclature necessarily more or less artificial.

For the new plant I propose the name *Lechea juniperina* in allusion to the appearance of its densly leafy narrow panicle, which is often suggestive of a spiry red cedar (*Juniperus Virginiana*) in miniature.

LECHEA JUNIPERINA n. sp.

Tufted from a descending and branched woody root, 2–5 dm. high. Stems erect, often from an outcurved or ascending base, mostly purplish and naked below the middle at flowering-time, branched above the middle to form a dense narrow panicle; branches short, numerous, closely ascending, mostly 2–5 cm. long (1–9 cm.); pubescence consisting of fine white hairs, at first densely appressed, becoming loosely substrigose-hoary or even subtomentose-canescent; leaves numerous, crowded, ascending or appressed, thickish, slightly revolute in drying, only the midvein evident, glabrous above, below with the midrib finely strigose-

pubescent, and with some loose marginal hairs, the petioles 1–2.5 mm. long, appressed white-pubescent on the under side; stem-leaves linear to oblong-linear and oblanceolate, mostly tapering towards the base and more abruptly narrowed at the apex, acute or subacute, 1–2.2 cm. long, 2–4 mm. wide, those of the branches much smaller, narrowly linear, acute; inflorescence forming a dense and leafy narrow panicle, 10–20 cm. long (in reduced plants much smaller and more or less terminal), the numerous short-pedicelled flowers crowded in short axillary racemes and clustered at the ends of the branches; fruiting calyx ovoid-ellipsoid, 1.5–2 mm. long; pedicels 1–3 mm. long, often very short in the clustered terminal flowers; inner sepals elliptic, subacute, nerveless or faintly 3-nerved, reddish-purple, at least on the margins, the shorter outer sepals usually bright green in marked contrast; capsule ovoid-subglobose, 1.5–2 mm. long; petals reddish-purple, oblong-linear, with only a mid-vein, about 2 mm. long by 1 mm. wide; leaves of basal shoots narrowly elliptic, acute at each end, somewhat pilose-hairy on the midrib and margins or nearly glabrate. The plant blooms in August. The basal shoots do not begin to develop until September.

In reduced states the plant is only 1–3 dm. high and linear in general outline, the more persistent leaves appressed, the shortened panicle more or less terminal and sometimes only 1 cm. wide.

A form which grows in the shade of copses or park-like woods is more slender and less leafy than the typical plant of neighboring open ground, the leaves looser and often spreading, the more open panicle much less floriferous and more racemose-paniculate.

Specimens have been examined from various localities along and near the Maine coast from York Harbor to Mt. Desert.

Lechea intermedia Leggett differs from *L. juniperina* in less tufted habit and often larger size, becoming 7 dm. tall. The pubescence is somewhat coarser and more strigose, and composed of shorter, less whitened hairs, never becoming tomentose or canescent. The stem is usually greener, with the more persistent leaves less crowded and appressed and with more verticillate tendency. The leaves are often larger and longer, becoming 2.8 cm. long and 5 mm. wide, and are rarely if ever distinctly oblanceolate. The panicle is more or less loose and open with fewer and larger, more globose, longer-pedicelled flowers, which are mostly loosely racemose and never glomerate-clustered. The broader usually orbicular sepals are green or only with the slightest purplish tinge and strongly nerved, the nerves often five in number and branched;

the petals are larger and broader and mostly 3-nerved, the stigmas twice as large, the outer sepals commonly shorter and closer. The leaves of the basal shoots are often larger and relatively narrower and usually more hairy.

Lechea stricta Leggett, as compared with *L. juniperina*, is a paler, more silky-canescent plant, especially when young, the narrower acute leaves more pubescent, even pubescent over the lower surface and sparsely hairy above, the branches longer and massed above to form a broader panicle, the rather smaller and more globose longer-pedicelled flowers not at all glomerate, but distinctly racemose-paniculate and showing little or no purple.

L. juniperina appears to occupy a somewhat intermediate position between *L. intermedia* and *L. maritima* Leggett, although it need never be confused with the latter. *L. maritima* is, in fact, very distinct from all our species and is strongly characterized by its rigidly bushy-branched habit, dense tomentose-canescence and the oblong densely-pubescent leaves of the basal shoots.

Notes on two western Plants.

By P. A. Rydberg.

Lonicera glaucescens.

Lonicera parviflora var.? Torr. & Gr. Fl. N. Am. 2: 7 (partly). 1840.

Lonicera Douglasii Hook. Fl. Bor. Am. 1: 282. 1833. Not *Caprifolium Douglasii* Lindl. Trans. Hort. Soc. London, 7: 244. 1830.

Lonicera hirsuta glaucescens Rydb. Cont. U. S. Nat. Herb. 3: 503. 1896.

After seeing more material I have become perfectly convinced that this is just as good a species as any in the genus. The same conclusion has been reached independently by Dr. J. K. Small, who intended to describe it as new, not noticing my description cited above. He has also informed me of some of the localities given below. To the characters given in my description in the Cont. U. S. Nat. Herb. l. c., I can add a feature which then escaped my observation and which distinguishes *L. glaucescens*